



Industrial Energy Consumers of America

The Voice of the Industrial Energy Consumers

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Environmental Protection Agency
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Washington, DC 20460

FEDERAL PLAN REQUIREMENTS FOR GREENHOUSE GAS EMISSIONS FROM ELECTRIC UTILITY GENERATING UNITS CONSTRUCTED ON OR BEFORE JANUARY 8, 2014; MODEL TRADING RULES; AMENDMENTS TO FRAMEWORK REGULATIONS

On behalf of the Industrial Energy Consumers of America (IECA), a nonpartisan association of leading manufacturing companies with over \$1.0 trillion in annual sales, over 2,900 facilities nationwide, and with more than 1.4 million employees, we appreciate the opportunity to submit comments on the Federal Implementation Plan (FIP). IECA is committed to enhancing manufacturing competitiveness, middle class jobs, and contributing to the reduction of GHG emissions through voluntary industrial energy efficiency. As a result of investment in productivity, including consistent improvement in energy efficiency, industrial greenhouse gas (GHG) emissions are 22 percent below 1973 levels, while all other sectors of the economy have significantly higher emissions.

As significant consumers of electricity, we offer the following concerning insights of the implications of the Clean Power Plan (CPP) and the FIP.

- All of the EPA's CPP costs will be passed on to us, the consumer. For this reason, we are the most important stakeholder – not the electric generator.
- Besides the CPP, the EPA has implemented several regulations directed at the electric generation industry. Combined, these costs are having and will continue to have a significant impact on higher electricity prices. Higher electricity prices for the industrial sector reduces capital investment and middle class jobs. Over 12 million direct manufacturing jobs become at risk because our foreign competitors are not subject to the increased costs. The manufacturing sector is still recovering having lost 800 thousand jobs since 2010, and the manufacturing 2014 trade deficit remains very high at \$524 billion. Both figures indicate that U.S. manufacturing continues to struggle to compete with low-cost foreign competition. It is for this reason that the number one focus of the EPA should be on implementing the rule at the lowest cost.
- The CPP is designed to significantly increase the use of renewable energy. Higher demand for renewable energy will require substantial new investment in very expensive transmission and distribution costs that will be passed onto us, the industrial consumer. These will be additive costs, which further increase industrial competitive pressure.

OUTLINE

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- II. Current regulatory rules do not prevent industrial GHG leakage which undermines GHG reduction objectives.**
- III. Encourage voluntary use of existing and new CHP and WHP, and industrial energy efficiency.**
- IV. Summary of IECA recommendations to improve the treatment of CHP and WHP in the final rule.**
- V. Existing and new CHP and WHP systems provide significant environmental and economical benefits, middle class jobs, and electric reliability benefits.**
- VI. Treatment of existing and new CHP and WHP systems in a rate-based rule.**
- VII. Treatment of existing and new CHP and WHP systems, and industrial energy efficiency in a mass-based rule.**

KEY POINTS

I. Industrial Energy Consumers of America (IECA)

IECA membership represents a diverse set of industries including: chemical, plastics, steel, iron ore, aluminum, paper, food processing, fertilizer, insulation, glass, industrial gases, building products, brewing, independent oil refining, automotive, and cement. IECA member companies are significant users of CHP and WHP, and are also the companies that represent the potential new users of CHP and WHP.

IECA companies are energy-intensive trade-exposed (EITE), which means that relatively small changes to the price of energy can have significant negative impacts to competitiveness. Energy-intensive trade-exposed (EITE) companies are major stakeholders in this debate. EITE industries consume 73 percent of the entire manufacturing sector's use of electricity (26% of U.S.) and 75 percent of the natural gas (29% of U.S.).

II. Current Regulatory Rules Do Not Prevent Industrial GHG Leakage which Undermines GHG Reduction Objectives

EITE industries will pay for up to one-third of the costs of CPP implementation. EITE industries are also important base load consumers that use electricity 24/7. Importantly, as the price of electricity increases, these price sensitive industries will shift their electric load to states with low electricity prices or move their facilities outside the country. This has two negative impacts that the EPA rule does not address. As EITE industries move their electricity demand, GHG leakage will occur, accomplishing nothing environmentally. This also results in shifting the electricity costs to other consuming sectors.

III. Encourage Voluntary Use of Existing and New CHP and WHP, and Industrial Energy Efficiency

Voluntary action: Our primary interest in submitting these comments is to encourage the EPA to make changes to the rule to maximize the potential use of existing and new CHP, WHP systems, and industrial energy efficiency through the CPP FIP, so long as the options are voluntary. EPA

should award industrial companies that reduce electricity consumption with GHG credits that can be applied toward the CPP compliance.

Give industrials credit for reducing electricity demand and avoid double counting: Because the industrial sector has consistently invested in energy efficiency for decades, there are limited low-cost GHG reductions. Despite this, industrial companies will continue to invest capital in energy efficiency projects which will reduce GHG emissions and industrial electricity demand. When they do reduce electricity consumption, it is important that they get credit for the GHG emission reductions – rather than the electric generator. This also avoids double counting.

Industrial GHG reductions should not reduce our baselines: It is essential that if industrial companies reduce GHG emissions under this rule, that the reductions will not reduce their own corporate GHG baseline. In the event of future regulation of GHGs of the industrial sector, these GHG reduction credits will be essential to maintaining global competitiveness and jobs.

We appreciate the fact that the EPA has consistently recognized the benefits of energy efficiency in the Model Trading Rule and supporting documents. IECA also appreciates EPA's recognition that "CHP units are low-emitting electric generating resources that can replace generation from affected [electric generating units] EGUs" and that WHP can produce electricity with "no incremental CO₂ emissions."

Residential sector offers the best opportunity for GHG Reductions: We are of the opinion that the residential sector provides significant opportunity to reduce GHG emissions. Increased use of insulation is especially cost-effective.

IV. Summary of IECA Recommendations to Improve the Treatment of CHP and WHP in the Final Rule

In a rate-based rule, EPA should:

- a. Include existing and new CHP and WHP systems as an eligible measure that can produce emission rate credits (ERCs) in both the model rule and federal plan;
- b. Account for the CO₂-free MWhs generated by CHP by comparing it to actual emissions data from affected EGUs (avoided GHG emissions) from the previous calendar year, rather than a future natural gas target; and
- c. Clarify that line losses can be included in the calculation of ERCs for all non-affected CHP and WHP systems.

In a mass-based rule, EPA should:

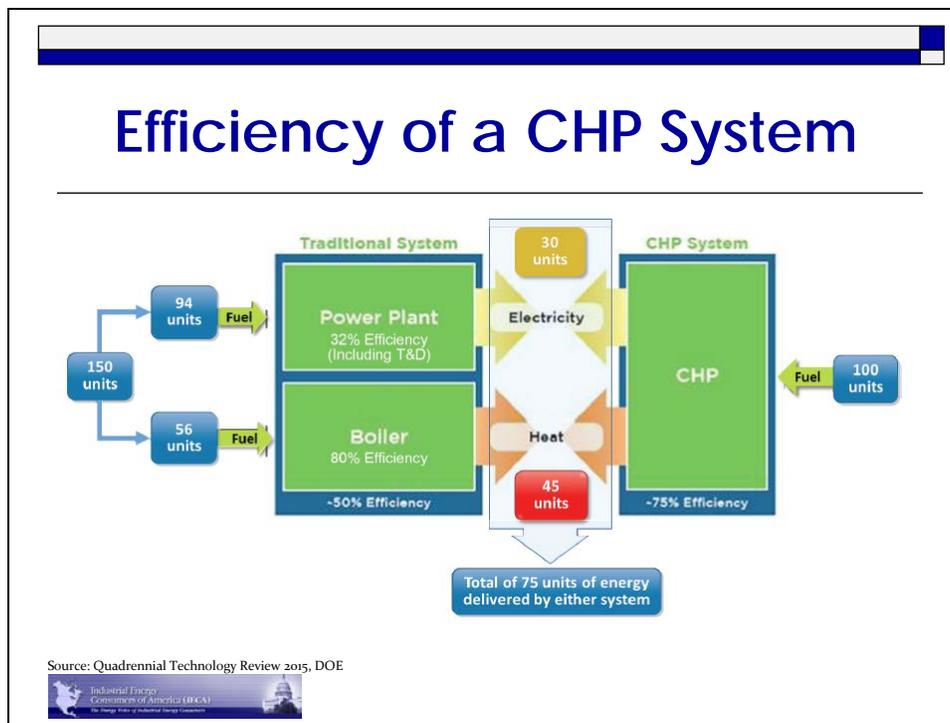
- a. Provide states with an allowance distribution mechanism to promote voluntary GHG reductions from existing and new CHP and WHP systems, and industrial energy efficiency in the model mass-based trading rule.

V. Existing and New CHP and WHP Systems Provide Significant Environmental and Economical Benefits, Middle Class Jobs, and Electric Reliability Benefits

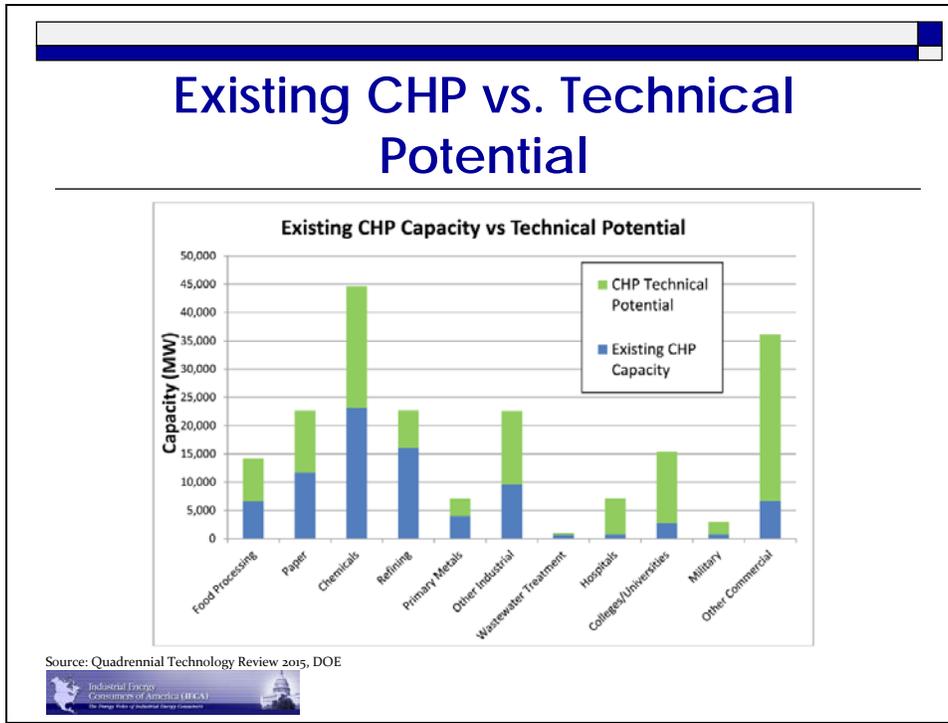
Industrial companies use CHP to generate the needed power and steam necessary to operate their facilities competitively. There is currently about 83 gigawatts of CHP capacity, which accounts for 8 percent of U.S. demand. All of the steam and most of the power generated is consumed by the industrial facility. Because CHP units can reduce costs and improve reliability of energy supply to the industrial facility, these CHP units help support millions of middle class manufacturing jobs. Additionally, WHP can generate electricity with no additional fuel and no incremental emissions. These are clear positive distinctions when compared to other types of electric generating units.

CHP units are also more energy efficient than other types of electric generation units. CHP units can run with energy efficiencies of upwards to 70 percent. Because CHP and WHP systems produce electricity at the point of use, the losses associated with transmission and distribution (T&D) can also be eliminated. Line loss accounts for about 7 percent of energy loss. CHP and WHP reduce energy use (losses) and defer or eliminate the need for costly new T&D investment.

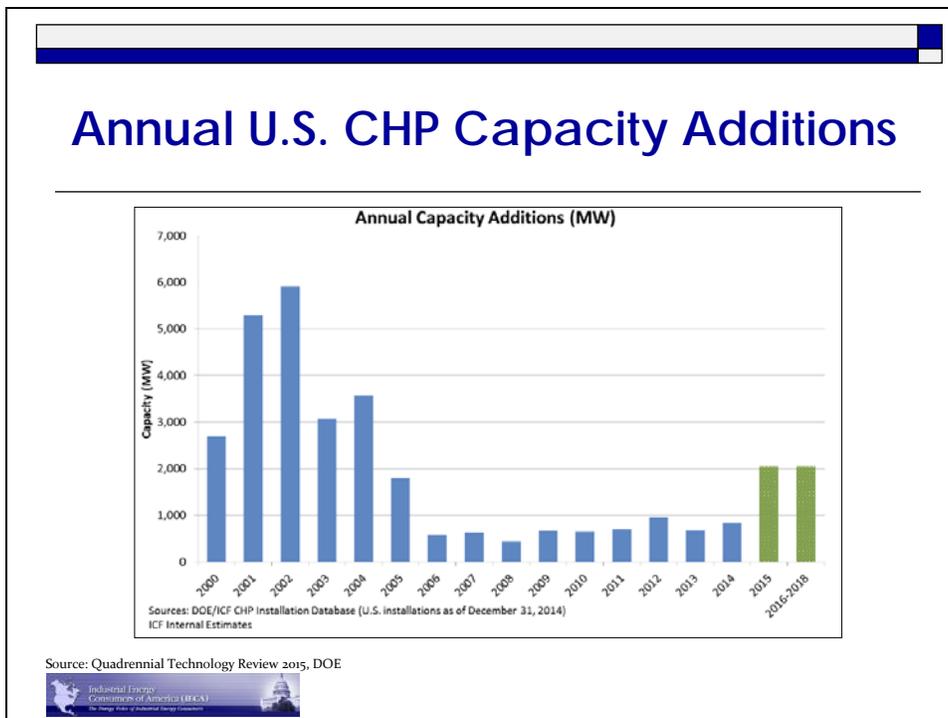
CHP and WHP units increase grid electric reliability. Because these systems can operate independent of the grid, they can continue to provide heat and electricity during extreme weather events, which often compromise the grid. They can also be sited to relieve grid congestion, which further enhances reliability.



The EPA recognizes these benefits. The final rule highlights CHP's thermal efficiency and states that CHP and WHP are eligible for ERCs, and exempts most industrial CHP systems. We also note that in August 2012, the Administration announced a goal of installing 40 gigawatts of new CHP by 2020. Achieving this goal would annually save energy users 1 quadrillion Btu and reduce CO₂ emissions by 150 million metric tons. The U.S. Department of Energy (DOE) estimates that increasing CHP from its current 8 percent share of U.S. electric power to 20 percent by 2030 would reduce CO₂ emissions by more than 800 million metric tons per year.



However, these goals are not achievable in a business-as-usual mode. Despite CHP and WHP advantages, there are significant regulatory and financial barriers to operating existing units and to building new CHP and WHP systems. Many industrial CHP systems have shutdown and a large number of existing units are running significantly under their rated capacity. Since the passage of the Energy Policy Act of 2005 and changes it made to the Public Utilities Regulatory Policy Act (PURPA), relatively few new CHP units have been built. It is for this reason that we urge EPA to encourage the use of existing and new CHP and WHP systems through this rule.



VI. Treatment of Existing and New CHP and WHP Systems in a Rate-Based Rule

IECA supports inclusion of existing and new CHP and WHP systems as an eligible measure that can produce emission rate credits (ERCs) in both a rate-based federal plan and a rate-based model trading rule. IECA is very concerned about the proposed approach in the model rate-based trading rule because it undervalues the contributions from CHP and WHP. We propose an alternative.

a. Include existing and new CHP and WHP systems as an eligible measure that can produce ERCs in both the model rule and federal plan.

ERCs are awarded to resources that produce electricity more cleanly than the target emission rate. Non-renewable resources can earn ERCs if they “deliver energy to or save electricity on, the electric grid.” The final rule’s emission guidelines (EGs) identify CHP and WHP as resources that qualify for the issuance of ERCs in rate-based state plans. CHP and WHP should likewise be included as eligible measures in the rate-based model rule and EPA should include CHP and WHP ERCs, should it develop a rate-based federal plan.

b. Account for the CO₂-free MWhs generated by CHP by comparing it to actual emissions data from affected EGUs (avoided GHG emissions) from the previous calendar year, rather than a future natural gas generation system target.

We believe that the proposed rule undervalues potential GHG reductions from CHP and WHP. While we support EPA’s adoption of the avoided emissions approach to determine the incremental emissions rate, we are concerned that the applicable reference CO₂ emission rate proposed in the model rule significantly undervalues the emissions benefits of a CHP system and will – as a practical matter – eliminate CHP as a potential compliance option.

The EPA’s proposed “reference rate” for CHP systems has two major problems. It compares CHP output to natural gas generation, rather than the actual generation that is avoided due to CHP deployment, and it compares the CHP output to emission target rates, rather than real-time emissions rates.

IECA believes that EPA has chosen to compare CHP to the natural gas target rate because it has characterized CHP as a “low-emitting generation resource,” and believes it must therefore treat CHP in the same manner that it treats all other “low-emitting generation resources.” The final rule allows affected EGUs that perform better than the emission standard to generate ERCs. We agree that ERCs for such units should be calculated based on the specific emission rate target for those affected units. However, unlike high-performing affected natural gas generating units, “non-affected” CHP units do not have specific emissions targets and therefore do not need to be compared to a specific emission standard. Instead, the emissions benefits from CHP can be converted to an equivalent amount of zero-emission MWh generated by using a “reference emissions rate” that reflects the emissions rate of affected EGUs being displaced by non-affected CHP, similar to the way that MWhs of savings from demand-side efficiency results from reductions in generation from affected units. In fact, CHP is the *only* non-affected low-emitting generation resource identified in the rule. As such, concerns about consistent treatment are unwarranted.

Importantly, IECA also believes that the EPA should define the reference emissions rate using “actual” emissions data from affected EGUs from the “previous” calendar year. This can be achieved with several alternative choices. We recommend that states can choose to use the average affected EGU emission rate for the eGRID sub-region in which the CHP project is located or the average affected EGU emission rate for each state.

c. Clarify that line losses can be included in the calculation of ERCs for all non-affected existing and new CHP and WHP systems.

EPA recognizes the value that CHP and WHP units have in reducing line losses. EPA states in the final rule, “[t]he opportunity for improvement is large because, on average, line losses account for approximately seven percent of all electricity generation.” Accordingly, the model rate-based trading rule proposes that for “demand-side EE programs ... the presumptively approvable approach is to use the smaller of 6 percent or the calculated statewide annual average T&D loss rate (expressed as a percentage) calculated using the most recent data published by the U.S. EIA State Electricity Profile.” EPA should clarify and support use of the 7 percent line loss as the basis of calculating ERCs.

VII. Treatment of Existing and New CHP and WHP Systems, and Industrial Energy Efficiency in a Mass-Based Rule

a. Provide states with an allowance distribution mechanism to promote voluntary CHP, WHP, and industrial energy efficiency in the model mass-based trading rule.

CHP, WHP, and industrial energy efficiency projects help reduce generation emissions from affected units. But if the projects are implemented independently of state and utility programs they would receive no value for their emission benefits under a mass-based approach. Therefore, such projects should be encouraged through an allowance distribution approach.

Submitted by:
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